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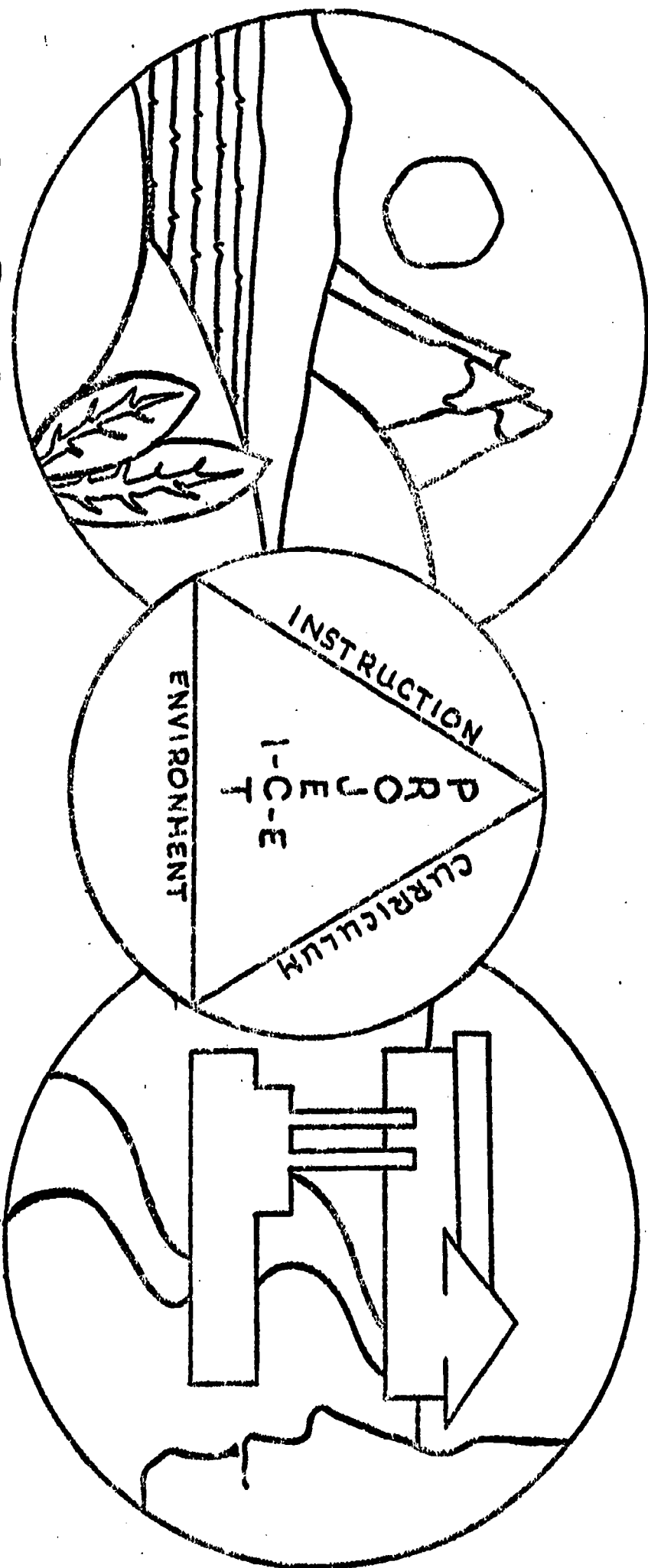
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ABSTRACT

This social studies guide, for use in grades 7 and 8, is one of a series of guides, K-12, that were developed by teachers to help introduce environmental education into the total curriculum. The guides are supplementary in design, containing a series of episodes (minilessons) that broaden the student's views of environmental problems through social studies activities. The episodes are built around 12 major environmental concepts that form a framework for each grade or subject area, as well as for the entire K-12 program. Although the same concepts are used throughout the K-12 program, emphasis is placed on different aspects of each concept at different grade levels or in different subject areas. This guide focuses on aspects such as sociology, economics, psychology, and political science. The 12 concepts are covered in one of the episodes contained in the guide. Further, each episode offers subject area integration, subject area activities, interdisciplinary activities, cognitive and affective behavioral objectives, and suggested references and resource materials useful to teachers and students.
(Author/TK)

ENVIRONMENTAL EDUCATION GUIDE

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SOCIAL STUDIES 7-8

Robert J. Karpinski
Project 1-0-1

P R O J E C T I - C - E
(Instruction-Curriculum-Environment)
1927 Main Street
Green Bay, Wisconsin 54301
(414) 468-7464

PROJECT STAFF

Robert Warpinski - Director

Robert Kellner Terrence Hess - Assistant Directors

George Howlett, Jr. - E. E. Specialist

Nancy Timm Lynn Kuehn - Secretaries

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Wisconsin Area "B" Regional Project
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Ludwig Petersen
Coordinator, C.E.S.A. #3

John F. David
Coordinator, C.E.S.A. #9
Project Administrator

Kenneth Poppy
Coordinator, C.E.S.A. #8

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FORWARD TO PROJECT I-C-E ENVIRONMENTAL EDUCATION GUIDES

In 1969, the First Environmental Quality Education Act was proposed in the United States Congress. At the time of the introduction of that legislation, I stated:

"There is a dire need to improve the understanding by Americans of the ominous deterioration of the Nation's environment and the increasing threat of irreversible ecological catastrophe. We must all become stewards for the preservation of life on our resource-deficient planet."

In the three years since the Environmental Education Act was passed by the Congress, much has happened in the United States to reinforce the great need for effective environmental education for the Nation's young people. The intensive concern over adequate energy resources, the continuing degradation of our air and water, and the discussion over the economic costs of the war against pollution have all brought the question of the environmental quality of this nation to a concern not merely of aesthetics but of the survival of the human race.

The intense interest by the public in the quality of our lives

as affected by the environment clearly indicates that we cannot just use incentives and prescriptions to industry and other sources of pollution. That is necessary, but not sufficient." The race between education and catastrophe can be won by education if we marshal our resources in a systematic manner and squarely confront the long-term approach to saving our environment through the process of education.

As the incessant conqueror of nature, we must reexamine our place and role. Our world is no longer an endless frontier. We constantly are feeling the backlash from many of our ill-conceived efforts to achieve progress.

Rachel Carson's theme of "reverence for life" is becoming less mystical and of more substance as our eyes are opened to much of the havoc we have wrought under the guise of progress. A strong commitment to an all-embracing program of environmental education will help us to find that new working definition of progress that is a pre-requisite to the continued presence of life on this planet.

- Senator Gaylord Nelson

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PREFACE

The energy crisis, overpopulation, air and water pollution and the depletion of man's natural resources--sound familiar? The apparent need for environmental quality through education has never been so intense as it is today. This concern is exhibited by industry, interest groups and governmental agencies and by the young, those individuals you are teaching.

Seventh and eighth graders have a noticeable awareness of their environment, its problems and potential solutions. Nevertheless, students' views of a problem are usually limited to the obvious and confined to the local community. Now is the time to broaden the students' view of environmental problems, and you as a teacher have the opportunity to do just that. Man's manipulation of his world and his basic survival have vast implications for social studies classes. Social studies offers excellent avenues of exploration into existing world environmental problems. Sociology, economics, psychology, political science, history or geography--all lend their insights into preserving and conserving the environment. Integrated environmental education materials like this guide allow the student to develop attitudes, clarify values and promote decision making.

Through Project I-C-E (Instruction-Curriculum-Environment), you have the necessary materials to supplement your present social studies program. The possibilities herein suggested are limitless; the learning avenues for environmental education are open to you.

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D. C. Aderhold, Bonduel
Joan Aloto, Denmark
Mary Anders, Winnecone
Eugene Anderson, Peshigo
James Anderson, Green Bay
John Anderson, Peshigo
Peggy Anderson, Green Bay
Walter Anderson, Wausaukee
Angela Anthony, Gibraltar
Dr. Harold Baeten, St. Norbert, DePere
William Bagg, Shiocton
Anthony Balistreri, Howard-Suamico
Lowell Baltz, Weyauwega
David Bartz, Spoon River Bay
Bonnie Beamer, Coleman
Robert Becker, Fox Valley Luth., Appl.
William Behring, Ladysburg, Oshkosh
David Bell, Neenah
Marie Below, Clintonville
Louise Benter, Gillett
Lillian Berges, Seymour
Laura Berken, Oconto Falls
Peter Biolo, W. DePere
Carmella Blocha, Green Bay
Marilyn Blonde, Shawano
Barbara Jean Bobrowitz, Green Bay
William Bohne, Kimberly
Gallen Braun, Lena
Jean Charnetski, Sevastopol
Clifford Christensen, Winnecone
Bob Church, Little Chute
Lee Clausen, Luxemburg-Casco
Katherine Colburn, Algoma
Marie Dolbun, Algoma
Bill Fole, Gillett
Willard Collins, Grivitz
Ronald Conradt, Shiocton
Ken Couillard, Hortonville

John Cowling, Niagara
James Curran, Green Bay
Sara Curtis, Green Bay
Nicholas Dal Santo, Pembine
Judy DeGrave, W. DePere
Carol DeGroot, Ashwaubenon
Duane Delorme, Green Bay
Ellen Depuydt, Gillett
John DeWan, Green Bay
Robert H. Dickinson, Oconto
R. A. Dirks, Gillett
Robertta Dix, St. Joe's Acad., G.B.
Dennis Dobzenski, White Lake
Darwin Eastman, Appleton
Linda Eiting, Appleton
Janet Ellinger, Ashwaubenon
Phyllis Eljelson, Wash. Island
Raymond Emeric, Hortonville
Mike Ercegovic, Winnecone
Gery Farrell, Menasha
Keith Fawcett, W. DePere
Billie Felchtlinger, Green Bay
Rev. Bruno Frigo, Abbot Penning, DePere
Ann Fuhrmann, Marinette
Raymond Gantenbein, Green Bay
Dona Geeding, Menasha
Armin Gerhardt, Appleton
Leroy Gerl, Oconto
Jack Giachino, Seymour
Rev. Gordon Gilsdorf, Sacred Heart, Onida
Mike Gilef, St. Matthews, Green Bay
Lillian Goddard, Coleman
Charles Gossas, Freedom
Karen Grunwald, St. James Luth., Shawano
Michael Haaseh, Pulaski
St. Barbara Haase, St. Bernard, G.B.
Janellie Haggerty, Resurrection, G.B.
Robert J. Haglund, Green Bay

Robert Haen, Luxemburg-Casco
Donald Hale, Winnecone
Lee Halberg, Appleton
Raymond Hammond, Hortonville
Russ Hanseter, Seymour
Herbert Hardt, Gibraltar
Emma Jean Harman, Sevastopol
Bill Harper, Lena
Beth Hawkins, Xavier, Appleton
Mike Hawkins, Xavier, Appleton
Terry Heckel, Marinette
Gary Heil, Denmark
Jerome Hennes, Little Chute
Robert Herz, St. James Luth., Shawano
Wendell Hilskeetter, Weyauwega
Nannette Hoppe, Howard-Suamico
Joe Hucek, Pulaski
Catherine Huppert, DePere
Gene Hurstish, Green Bay
James Huss, Freedom
John Hussey, Green Bay
Sue Hustling, Green Bay
Barbara Huth, Menasha
Sr. Claudette Jeanguart, St. Charles,
Lena
Darrell Johnson, Hortonville
DeAnna Johnson, Denmark
Kathleen Jonen, Kaukauna
Sr. Lois Jonet, Holy Angels, Appleton
Ester Kaatz, Wausaukee
Paul Kane, Ashwaubenon
Ken Kappell, St. Alonsius, Kaukauna
K. L. Karpinen, W. DePere
Nel Kasen, Gibraltar
Ken Keliber, Appleton
Mary Chriss, Hortonville
Mike Kersten, Suring
George Kreiling, Marinette

James Krenck, Coleman
 Bernadynne King, Neenah
 Everett Klinzing, New London
 Douglas Koch, Cath. Cert., Marinette
 Frank Koehn, Resurrection, G.B.
 Lynn Koehn, Pulaski
 Jack Koivisto, Green Bay
 Fred Krueger, Oshkosh
 Fritz Krueger, Oshkosh
 Jim Krueger, Winneconne
 Ervin Kunesch, Marinette
 Sr. Mary Alyce Lach, Cathedral, G.B.
 Thomas LaFountain, Appleton
 Steven F. Lapacz, Resurrection, G.B.
 Mac Rose LaPointe, St. John High, L. Chute
 Rosemarie Lauer, Hortonville
 Kathleen LeBreck, Oconto
 Robert Lee, Neenah
 Don Leibelt, Green Bay
 Philip Lewicki, Gillett
 Harold Lindhorst, St. Martin Luth., Clint.
 Edward Linn, Appleton
 John Little, Winneconne
 Dennis Lord, Little Wolf
 Ellen Lotz, W. DePere
 Jean Lucier, Ashwaubenon
 Lad, Luedtke, St. Rose, Clintonville
 Roy Lukes, Gillett
 St. Anna Mary, St. Phillips, G. B.
 James Maki, Sturgeon Bay
 Corie Macchesi, Howard-Suamico
 Ronald Nantz, DePere
 Joyce Matejka, Algoma
 Mary Mathis, Denmark
 Margaret McCambridge, White Lake
 Judy McGowan, Green Bay
 Kathieen McMahon, Green Bay
 Margaret McMahon, Little Chute
 Rick Menard, Little Chute
 Priscilla Mereness, Wrightstown
 Robert Meyer, Neenah

Richard Minten, W. DePere
 David Miskulin, Goodman
 Wendell Mitchell, Green Bay
 Sharon Moore, Pulaski
 Gloria Morgan, Linsmeier, G.B.
 Lyle Nahley, Green Bay
 Arnold Neuzil, Shiocton
 Jim Nuthals, Lourdes, Oshkosh
 Dorothy O'Brien, Wausaukee
 Mildred O'Connell, Green Bay
 Don Olsen, Shawano
 Neil Olsen, Pulaski
 Jean Marie O'Malley, Green Bay
 Terry Otto, St. John Luth., Suring
 Carl Paquet, Denmark
 Ed Patschke, Menasha
 Arthur Paulson, Oconto Falls
 David Paulus, Neenah
 George Pederson, Southern Door
 AnnaMay Peters, Florence
 Connie Petersen, St. Martin Luth., Clint.
 Paul Plantico, Green Bay
 Gene Ploetz, Kaukauna
 Virginia Pomusl, White Lake
 Willard Poupore, Little Chute
 Marie Prochaska, Lena
 Christine Proctor, Wausaukee
 Rosemarie Rafath, Clintonville
 Mark Reddel, St. Martin Luth., Clint.
 Jack Rickaby, Hortonville
 William Roberts, Sturgeon Bay
 Gordon Rohloff, Oshkosh
 Gladys Roland, Little Wolf
 Ben Roloff, Howard-Suamico
 Jack Rosenthal, Lourdes, Oshkosh
 Kathryn Rowe, Appleton
 Roger Roznowski, Southern Door
 Mary Margaret Sauer, Menasha
 Elmer Schabo, Niagara
 Edwin Schaefer, Kaukauna
 William Schaff, St. Joseph, Appleton
 Arthur Schelk, Suring
 Greg Schmitt, Cathedral, G.B.
 Larry Schneider, DePere
 Ron Schriever, Omro
 Allan Schuh, Pulaski
 Janet Serrahn, Sevastopol
 Carolyn Stoehr, New London
 Calvin Siegrist, Howard-Suamico
 Peter Skroch, Oconto Falls
 Mary Smith, Green Bay
 Lee Smoll, Little Chute
 David Soltesz, Crivitz
 Bruce Sonnenberg, Neenah
 Beverly Splitgerber, Green Bay
 Wayne Splitgerber, Green Bay
 Doris Stehr, Mt. Calvary Luth., Kimberly
 Bill Stillion, Shawano
 Ginger Stuvetraa, Oshkosh
 Judy Sweedy, Denmark
 Richard Switzer, Little Chute
 Sr. Dorothy Marie Tappa, Xavier, Appl.
 Nancy Tebo, Neenah
 Jackie Thiry, Denmark
 John Torgerson, Kewaunee
 Clarence Trentlage, Freedom
 Carol Trimberger, Kewaunee
 Jack Twett, Freedom
 Tina Van Susteren, Holy Name, Appleton
 Mary Wadzinski, Howard-Suamico
 Marion Wagner, Gillett
 Ruth Ward, Crivitz
 Cathy Warnack, White Lake
 Susan Welier, Green Bay
 Lallae Werner, Kaukauna
 Lila Wertsch, St. Margaret Mary, Neenah
 Ruth Windmiller, Greer Bay
 Tom Weyers, Cathedral, Green Bay
 James Wiza, DePere
 Ralph Wohlt, New London
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DIRECTIONS FOR USING THIS GUIDE

This guide contains a series of episodes (mini-lesson plans), each containing a number of suggested in and out of class learning activities. The episodes are built around 12 major environmental concepts that form a framework for each grade or subject area, as well as for the entire K-12 program. Further, each episode offers subject area integration, multidisciplinary activities, where applicable, both cognitive and affective behavioral objectives and suggested reference and resource materials useful to the teacher and students.

1. This I-C-E guide is supplementary in design--it is not a complete course of study, nor is its arrangement sequential. You can teach environmentally within the context of your course of study or units by integrating the many ideas and activities suggested.
2. The suggested learning activities are departures from regular text or curriculum programs, while providing for skill development.

3. You decide when any concepts, objectives, activities and resources can conveniently be included in your unit.

4. All episodes can be adapted, modified, or expanded thereby providing great flexibility for any teaching situation.

5. While each grade level or subject area has its own topic or unit emphasis, inter-grade coordination or subject area articulation to avoid duplication and overlap is highly recommended for any school or district seeking effective implementation.

This total K-12 environmental education series is the product of 235 classroom teachers from Northeastern Wisconsin. They created, used, revised and edited these guides over a period of four years. To this first step in the 1,000 mile journey of human survival, we invite you to take the second step--by using this guide and by adding your own inspirations along the way.

PROJECT I-C-E TWELVE MAJOR ENVIRONMENTAL CONCEPTS

1. The sun is the basic source of energy on earth. Transformation of sun energy to other energy forms (often begun by plant photosynthesis) provides food, fuel and power for life systems and machines.
2. All living organisms interact among themselves and their environment, forming an intricate unit called an ecosystem.
3. Environmental factors are limiting on the numbers of organisms living within their influence. Thus, each ecosystem has a carrying capacity.
4. An adequate supply of clean water is essential to life.
5. An adequate supply of clean air is essential for life.
6. The distribution of natural resources and the interaction of physical environmental factors greatly affect the quality of life.
7. Factors such as facilitating transportation, economic conditions, population growth and increased leisure time influence changes in land use and population densities.
8. Cultural, economic, social, and political factors determine man's values and attitudes toward his environment.
9. Man has the ability to manage, manipulate and change his environment.
10. Short-term economic gains may produce long-term environmental losses.
11. Individual acts, duplicated or compounded, produce significant environmental alterations over time.
12. Each person must exercise stewardship of the earth for the benefit of mankind.

A "Concept Rationale" booklet and a slide/tape program "Man Needs His Environment" are available from the I-C-E RMC to more fully explain these concepts.

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Environmental:	
CONCEPT NO.	1 - Energy
ORIENTATION	Energy Resources
Integrated with:	
SUBJECT	Social Studies
TOPIC/UNIT	Ancient history - Geography
BEHAVIORAL OBJECTIVES	STUDENT-CENTERED LEARNING ACTIVITIES
Cognitive:	In-Class:
List four ways that early man depended on plant life; directly through berries, etc. or indirectly through animals thus showing an understanding that energy from the sun is converted to a form all living things can use for life.	<p>A. Draw and describe or construct tools and weapons used by primitive men.</p> <p>B. Prepare reports to be given to class on life style of early man. Food gathering, hunting, etc.</p> <p>C. List types of plants and animals consumed by early man.</p> <p>D. Construct life cycle chart which will show position of man in relation to the plants and animals of his environment.</p> <p>E. Name present-day activities that resemble the food gathering and hunting practices of early man.</p>
Affective:	Outside or Community:
Gain an appreciation of man's total dependence on the sun from the food that he eats and the material that he uses by tracing all food back to the sun.	<p>A. Conduct a field trip of an available area to find examples of foods used by early man. (survival food).</p> <p>B. Visit a museum to observe tools used by early man.</p> <p>C. Locate book dealing with early man.</p>
Skills Used:	
<ol style="list-style-type: none"> 1. Ability to construct charts. 2. Oral skills. 3. Comparison/contrast. 	

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p><u>Publications:</u></p> <p>Books:</p> <p><u>How the First Men Lived,</u> <u>Hogben, Lancelot.</u> <u>Man's First Million Years,</u> <u>Lucas, Jannette.</u></p> <p><u>Prehistoric Man</u> <u>Time Life Series</u> Magazines - <u>Natural History</u> <u>National Geographic</u> <u>Appropriate Current</u> <u>Articles</u></p> <p><u>Audio—Visual:</u></p> <p>Film #220: <u>A World Is Born</u> I-C-E - RMC</p> <p>Kit 6: <u>Crisis of the Environment</u> I-C-E - RMC</p> <p><u>Community:</u></p> <p>Local Museum of Natural History - Exhibition on Primitive Man</p> <p>State Historical Society - History of Local Primitive Man</p>	

Environmental:

Integrated with:

CONCEPT NO. 1 - Energy

SUBJECT Social Studies

ORIENTATION Energy Resources - Sun

TOPIC/UNIT Ancient History

BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive: State two reasons why early man considered the sun as a god (Ra-Egyptian, Sun God).		In-Class:	Outside or Community:
		A. Creation of a chart of sun worship practices-legends, statues, ceremonies. B. Discussion of man's dependency on the sun. Attempt to justify early man's feelings. C. View Egyptian art work on the "Sun". D. Study the attitude of the Aztec towards the sun.	A. Observation of plant life in sun and shade areas, perhaps school lawn and shrub areas or forested area. B. Visitation to a department store to compile a list of sun-related products used by Americans. C. Using your media center, create a bibliography of reference books dealing with photosynthesis and the Egyptian sun worship.
Affective: Suggest comparisons with America's adoration of the sun. (Examples - sun tan, bathing, through a study of Ra, the Sun God of the Egyptians.			
Skills Used: 1. Location skills: Use of books Table of contents Appendix Index Pictures & Cartoons			

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(continued)

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p><u>Publications:</u></p> <p>Books: World Book Encyclopedia, Egypt. Life in the Ancient World, Random House, 1961.</p> <p>Magazines: Life National Geographic Natural History</p> <p><u>Audio-Visual:</u></p> <p>Films: 6949 <u>Sun's Energy</u>, color, 14 min. Bureau of Audio-Visual Instructions 1327 University Avenue P. O. Box 2093 Madison, Wisconsin 53701 Art Teacher. Kit 9, Environmental Quality Index, America Is in Trouble, I-C-E RMC</p> <p><u>Community:</u></p> <p>Department Store</p>	<p><u>SKILLS</u> (continued)</p> <p>3. Use of reference materials: Encyclopedias Readers Guide Card Catalog</p> <p>4. Organization skills: Note taking Making charts</p> <p>5. Evaluation information: Reading for a purpose Making inferences</p>

Environmental:

Integrated with:

CONCEPT NO. 2 - Ecosystem

SUBJECT Social Studies

ORIENTATION Ecosystem Community

TOPIC/UNIT Ancient History or Anthropology

BEHAVIORAL OBJECTIVES

Cognitive:

Construct a chart showing how the hunter and gatherer interacted with his ecosystem.

In-Class:

STUDENT-CENTERED LEARNING ACTIVITIES

Outside or Community:

Affective:

Volunteer to find information from other sources that illustrate the type of relationship early man had with the environment.

A. Class make a large chart showing raw foods today and those used in the Stone Age.

A. Fishing trip.

1. Students bring their own fishing equipment.

2. Cleaning of fish.

3. Compare the preparation of fish.

a. Prepare both ways if possible. (fry and smoke).

4. Compare fishing equipment of Stone Age with those of today.

C. Prepare written reports comparing the equipment and methods of hunting and fishing today with those of the Stone Age.

B. Visit to a natural history museum.

C. Sporting goods presentation on new fishing techniques and equipment.

Skills Used:

Skills of making a chart.

1. Gather illustrations.

a. Discuss and explain

b. Put an example on board

c. Read and interpret chart

SUGGESTED RESOURCES

CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

Library-books pertaining to food and tools of Stone Age:

1. Graven with Flint, F. Coe.
2. First Horseman, P. Crowell.
3. How the First Men Lived by L. Hogben.
4. Man's First Million Years by J. Lucas

Excerpts from Golding's, The Inheritors.

Audio—Visual:

See sources of Environmental AV materials -

I-C-E bibliography of available materials -

Vertical file

Tips for a Good Field Experience,

I-C-E - RMC

Kit 8; Conservation - A Picture

Discussion Kit, I-C-E - RMC

Community:

Local sporting goods dealer

Environmental:		Integrated with:	
CONCEPT NO. <u>2 - Ecosystem</u>		SUBJECT <u>Social Studies</u>	
ORIENTATION <u>Land use and Abuse</u>		TOPIC/UNIT <u>U. S. History, Geography, Current Events</u>	
BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive: List one area where man's misuse of the environment has had a negative effect on the ecosystem.		In-Class: A. Show film depicting "dust bowl" B. Students locate books or articles which provide information on the "dust-bowl" years and its effect upon all living things in that area. 1. Take notes on reading, noting especially: a. Lack of food b. Interdependence of living organisms c. Causes of the "dust bowl" C. Research road building procedures. D. Show film "Junkdump". 1. Discuss the possible impact of existing situations illustrated by the film on the ecosystem. 2. Show "Junkdump" a second time.	Outside or Community: A. Visit farms and observe the interdependence of plants, animals, and humans. 1. In class, have children list or draw a diagram of interrelationships they observed. B. Visit quarry or gravel pit. C. Visit dumping area. D. Come Fly With Me---Any season Field Activity Guide, I-C-E - RMC Note: This activity provides positive motivation to student concerning land abuse.
Affective: Suggest several changes in man's technology which would lessen man's negative impact on his environment.			
Skills Used: 1. Using library aids to locate books. 2. Reading to find specific information. 3. Discussing. 4. Observing. 5. Note taking.			

SUGGESTED RESOURCES

CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

Man, Land: Williams College
Center for Environmental Studies,
The First Two Years, William
Carney, Williamstown, Mass.: :
William College, Dec., 1969
Plants, Man, and Life, Edgar
Anderson, University of Calif.,
Berkeley, 1967

Audio-Visual:Films:

Dust-Bowl, #6030
 Bureau of Audio-Visual Inst.
 1327 University Avenue
 P. O. Box 2095
 Madison, Wisconsin 53701
 Junkdump; I-C-E - RMC
 Kit 21, Eco Lab: A Study of Rural
 and Urban Ecology, I-C-E - RMC.
 Kit 25, The Land Use Game,
 I-C-E - RMC

Community:

Environmental:		Integrated with:	
CONCEPT NO. <u>3 - Carrying Capacity</u>		SUBJECT <u>Social Studies</u>	
ORIENTATION <u>Water's Importance to Population Centers</u>		TOPIC/UNIT <u>Sociology, Population Trends</u>	
BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive: Present three newspaper accounts pertaining to the impact technology has on the mobility of populations.		In-Class: A. Collect several magazine and newspaper articles related to population trends and/or view film depicting such trends. B. Discuss the following: 1. Why people relocate 2. Population density of urban and rural areas and its effect on the use of natural resources. 3. Assign individuals or small groups to put together a newspaper with three factual articles on the misuse of natural resources.	Outside or Community: A. Use encyclopedias to identify reasons for immigration or migration and to find other source books from the bibliographies found in the encyclopedia. B. Observe the employment which is a direct result of the natural resources in an area. C. Through research, try to find the reason why early settlers left their homeland to settle here.
Affective: Identify examples that show the need for conservation practices in his community.			
Skills Used: 1. Putting together a newspaper. 2. Writing in the vernacular of newspaper articles. 3. Ability to extract relevant information from various sources.			

SUGGESTED RESOURCES

CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

Newspapers:
 Social Studies textbooks or
 materials on the U. S.
 Encyclopedias.
 History of school, community,
 from local city library.
 Time magazine.

Audio-Visual:

Bridge to Inquiry:
Unit III - America's Environment.
Unit IV - Our Ailing Cities.
 (Univ. Microfilms)
 A Xerox Co.
 Ann Arbor, Michigan
 Game, The Planet Management Game,
 SG 7 I-C-E - RMC
Films:
 #430 - Urban Sprawl - I-C-E - RMC
 #5937 - Population Problem: U.S.A.:
Seeds of Change
 BAVI, Madison, Wis.

Community:

Environmental:		Integrated with:	
CONCEPT NO.	<u>3 - Carrying Capacity</u>	SUBJECT	<u>Social Studies</u>
ORIENTATION	<u>World Hunger</u>	TOPIC/UNIT	<u>Carrying Capacity and/or Current Events</u>
BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive: Verbally demonstrate that carrying capacity is a vital factor in the life of any system by role playing different national leaders solving food problems with a limit of five days or have destruction of the total environment.	In-Class:		Outside or Community:
	<p>A. After researching world hunger problems and/or viewing films or filmstrips on the problem, conduct a motivational discussion on:</p> <p>1. World Hunger Problems - India and other Asian countries.</p> <p>2. Amount of food in a closed system is limited.</p> <p>B. Problem: If one person requires "x" amount of food in a month, can 2, 3, 4 or more people survive on that "x" amount?</p> <p>C. Discuss the:</p> <p>1. Physical</p> <p>2. Mental</p> <p>3. Social reactions to an adequate diet.</p> <p>D. Write a report on the carrying capacity of a densely populated area.</p> <p>E. Discuss: How have some countries overcome crowding? Japan - floating factories, cremation rather than burial, vertical growth of cities (skyscrapers).</p>		<p>A. Have the class do research on how nations have tried to solve their food problems.</p> <p>B. Role play different national leaders solving food problems --time limit of five days or destruction.</p> <p>C. Invite local law enforcement officials to speak on problems of law enforcement in overcrowded areas.</p> <p>D. Invite City Planner to speak on present problems and hoped-for solutions of the future.</p>
Affective: Demonstrate an awareness of the wastefulness in his daily living by identifying examples of waste for one day.			
Suggest several ways that the identified wastes could be reduced or eliminated.			
Skills Used: 1. Library research 2. Problem solving 3. Interview techniques 4. Discussion			

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SUGGESTED RESOURCES

CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

The Population Bomb, by
Paul Ehrlich, 1968, Ballantine
 Books, Teacher's Reference.
Wildlife Communities, by
Clarence Hylander, 1966,
 Houghton-Mifflin Company.
The Social Sciences, Concepts
and Values, Grade 6, by
Jovanovich, 1970, Harcourt, Brace
 and World

Audio-Visual:

See sources of Environmental
 a-v materials - I-C-E, Bibliography
 of available materials - vertical
 file.

Kit 14, The Ecological Crisis,
 I-C-E - RMC

Films:

#7160-7161; Hunger in America

B.A.V.I., Madison, Wis.

#3583; Food and People

B.A.V.I., Madison, Wisconsin

Community:

Local health officer
 Interview or as guest speaker
 Local law enforcement officer

Environmental:		Integrated with:	
CONCEPT NO. <u>3 - Carrying Capacity</u>		SUBJECT <u>Social Studies</u>	
ORIENTATION <u>Population vs. Food Supply</u>		TOPIC/UNIT <u>Geography or Current Events</u>	
BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive: List on a piece of paper five factors which determine carrying capacity (climate, water, soil, etc.) on completion of these activities.	In-Class:	Outside or Community:	
	A. Discuss carrying capacity in relation to food supply and area in which they live.	A. Ask local farmer to tell the class how many people his farm can support in addition to his own family. Is there an absolute number his farm will support?	
	B. Write a letter to colleges to get information on studies that may have been conducted, involving overpopulation.	B. Investigate an area of set dimension (1 acre).	
Affective: Support the need for population control as well as the preservation of productive agricultural land.	C. List variables which can increase the productivity of the land.	1. Determine amount of food that can be produced on that acre.	
	1. Fertilizer, irrigation, crop rotation, erosion prevention, etc.	a. Ask farmer how much was produced last year.	
	2. Realize that even with these additives there exists an ultimate limit of production.	b. Does he know of, or is he using methods to increase production?	
Skills Used: 1. Interviewing 2. Cause and effect thinking. 3. Problem solving. 4. Writing letters seeking information. 5. Discussion		C. Ask local farm agent to accompany class and point out new methods being experimented.	

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p><u>Publications:</u></p> <p>Books and Booklets - Bibliography of available materials, I-C-E.</p> <p><u>Audio-Visual:</u></p> <p>See sources of Environmental AV materials - I-C-E bibliography of available materials - Vertical file.</p> <p>Film: #3583; <u>Food and People</u>, BAVI, Madison, Wisconsin</p> <p><u>Community:</u></p> <p>American Agricultural Association Local college Sociology Dept. Univ. of Wisconsin - School of Agriculture</p>	

Environmental:		Integrated with:	
CONCEPT NO. 4 - Water		SUBJECT Social Studies	
ORIENTATION Water Uses		TOPIC/UNIT Geography	
BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive: List five reasons for the need of clean water showing that an adequate supply of clean water is essential for life.		In-Class: <ol style="list-style-type: none"> Have class answer and discuss the following: <ol style="list-style-type: none"> How do we use water in our daily lives? How many like to go fishing? Name kinds of fish you catch. Allow students to tell some of their fishing experiences. Fishing is an industry. Show film, "Wisconsin Fish" (tells about 21 fish in color). Show film, "Fishing Five Great Lakes". Have the class discuss the balance of nature within lakes, river, and stream. 	Outside or Community: <ol style="list-style-type: none"> Visit a fish hatchery. <ol style="list-style-type: none"> Observe the raising of fish at different stages. Notice all the care given to young fish. Learn why we have fish hatcheries. Learn to identify fish with the following activity: <ol style="list-style-type: none"> Each student should select one fish and make a special study of it. Then report this information to class. Student should draw, color or paint a large illustration of his fish on 12" x 18" paper. Have a member from the Dept. of Natural Resources talk to class about fish and fish management.
Affective: The need for maintaining an adequate supply of clean water.			
Skills Used: <ol style="list-style-type: none"> Identify characteristics of various fish. Speak in a clear voice. Speak in his own words. Show colored illustration. Ask for questions at end of report. Discussion 			

SUGGESTED RESOURCES

CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

Fish Guide to Familiar American Species, Zim and Shoemaker.
All About Fish, Carl Burger.
Fish and Their Ways, Herbert S. Zim.
Bulletins - Dept. of Natural Resources:
Wisconsin Game Fish.
Wisconsin Fish Management,
Pub. 2-5-52.
Fish Habitat Development.

Audio-Visual:

Wisconsin Fish.
Funfish for Everyone
Better Fishing.
Northern Walleye Story.
Coho.
Invader of the Great Lakes.
(all films available from the
Department of Natural Resources,
Kit 12, Water Pollution, ICE - RMC
Film #5622; Fishing Five Great
Lakes
BAVI, Madison, Wisconsin

Community:

Dept. of Natural Resources:
Fish manager to speak to class
on fish and fish management.

Environmental:

Integrated with:

CONCEPT NO. 4 - Water

SUBJECT Social Studies

ORIENTATION Water Uses

TOPIC/UNIT History or Geography

BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive:	List three reasons why early population centers developed along waterways.	In-Class:	Outside or Community:
Affective:	Promote the idea that an adequate supply of water is essential to life and there is a need for conservation of water in all communities.	A. Examine several relief maps.	A. Locate books on the early civilization and westward movements of the people in the United States.
		B. Discuss construction of relief maps with plaster of paris, paper mache or clay.	1. Note from the readings how man used and misused the water supply.
		C. Discuss possible uses of water from the early 1600's to present time.	2. Note from population maps of areas that are being studied, where people settled.
		D. Assign:	B. Invite a field representative of the State Conservation Department to discuss how water is being used in the school community.
		1. Groups to construct relief maps using either clay technique depicting man's use of water in a rural or urban center.	1. Discuss with representative what can be done to clean polluted water and how the water supply in the school community can be put to better use.
		2. Write a brief report on how man used and/or misused the water supply in each area, and how it could have been used in order to conserve the supply.	C. Art teacher to explain the construction of relief maps using plaster of paris, paper mache or clay.
Skills Used:			
	1. Formation of relief maps from paper mache, clay or plaster of paris.		
	2. Ability to express clear and concise thoughts through the media of report writing.		
	3. Interviewing a resource person.		

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SUGGESTED RESOURCES

CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

Basic Text.
Atlas.
Free road maps (for detail). Any
oil company, (Standard, etc.).

Audio-Visual:

T. & St. team. #320, ICE KMC.
Booms. #400, ICE RMC.
Men & day, #350, ICE RMC.
Kit 12 Ecology: Water Pollution,
IMC RMC.

Community:

Area Dept. of Natural Resources
representative
Art teacher

Environmental:		Integrated with:	
CONCEPT NO.	5 - Air	SUBJECT	Social Studies
ORIENTATION	Air Pollution	TOPIC/UNIT	Current Events
BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive: The student will list three ways in which air pollution is harmful.		In-Class:	
		A. Brainstorm the advantages and disadvantages of industrialization.	
		B. Show filmstrip <u>Environmental Pollution...Our World in Crisis.</u>	
		C. Play simulation game <u>Smog</u> to discover possible solution to the air pollution problem in an industrial area.	
		D. Prepare bulletin board display from snapshots, newspaper articles and illustrative drawings of the advantages and disadvantages of a local industry or industries.	
		1. Students could take their own snapshots for display.	
		2. Use local paper.	
		E. Propose an industry or industries of your own area and debate the pros and cons of that industry.	
Affective: The student will become more aware of the air pollution problem and see the need for a more active role by individuals in solving the problem.		Outside or Community:	
		A. Organize a field trip to an industrial area.	
Skills Used: <ol style="list-style-type: none"> 1. Brainstorming techniques. 2. Playing a simulation game. 3. Preparing bulletin board. 4. Debating. 			

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p><u>Publications:</u></p> <p><u>Discovering American History</u>, Holt Rinehart & Winston, 1967. pp. 545-574.</p> <p><u>Dirty Air, Give Earth a Chance</u> Series, Project, Environmental Science Center.</p> <p><u>Discussion and Debate</u>, National Textbook Company.</p> <p><u>Thirty Basic Speech Experiences</u>, Clark Publishing.</p>	
<p><u>Audio-Visual:</u></p> <p>Filmstrip: Ward's Natural Science Establish- ment, Inc. 1969</p> <p><u>Environmental Pollution...</u> <u>Our World in Crisis</u>, FS, ST1; Project I-C-E Resource Center, 1927 Main Street Green Bay, Wisconsin 54301</p> <p><u>Smog, The Air Pollution Game</u>, SG1; Project I-C-E RMC.</p> <p>Ibid.</p> <p>Kit 1, <u>Topics in Ecology</u>, I-C-E RMC</p>	<p><u>Audio-Visual: (Continued)</u></p> <p><u>Environmental Quality Kit</u>, Write: Dr. Pepper Co., Pepsi Cola, Oshkosh, Wisconsin</p> <p>Film: <u>Men at Bay</u>, #250, 25 minutes, I-C-E RMC.</p>
<p><u>Community:</u></p> <p>Local Industries English teachers UWGB Environmental Sciences Dept., Green Bay, Wisconsin</p>	

Environmental:		Integrated with:	
CONCEPT NO. <u>5 - Air</u>		SUBJECT <u>Social Studies</u>	
ORIENTATION <u>Air Pollution</u>		TOPIC/UNIT <u>Regional Geography or Current Events</u>	
BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive: List and describe five ways the air becomes polluted through a report, a play, or an experiment on air pollution.	In-Class: A. Show filmstrips: <u>Air and Life.</u> B. Discuss how air becomes polluted. Have comparative discussion of air pollution in reference to Pittsburgh, Chicago, and Los Angeles in U. S., with Cologne, Hamburg and Berlin of West Germany. C. List ways the air becomes polluted. D. Suggestive activities: 1. Reports on air pollution. 2. Write a play pertaining to air pollution. 3. Student may illustrate, with an experiment, the pollution of air.	Outside or Community: A. Have class take a trip to a local industry and observe the pollution; also the ways they have begun to improve this condition.	
Affective: Demonstrate an awareness of ways that the air is polluted in their local community, and promotes the need for curtailing the source of, or eliminating the problem.			
Skills Used: 1. Discussion 2. Observation 3. Reporting			

SUGGESTED RESOURCES

CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

Environmental Science Center,
Dirty Air.
Scientists's Institute for Public
Information - Air Pollution.
Write to:
Project I-C-E
Resource Center
1927 Main Street
Green Bay, Wisconsin 54301

Audio-Visual:

Air, I-C-E, Resource Center,
1927 Main Street, Green Bay, Wis.
Air and Life, I-C-E, Resource
Center, 1927 Main Street
Green Bay, Wisconsin
Film: Men at Bay, 25 minutes,
#250, I-C-E RMC.
Kit 1, Topics in Ecology
I-C-E RMC.

Community:

Visit an industry.

Environmental:

Integrated with:

CONCEPT NO. 5 - Air

SUBJECT Social Studies

ORIENTATION Air Pollution

TOPIC/UNIT Cultural Geography or Current Events

BEHAVIORAL OBJECTIVES

STUDENT-CENTERED LEARNING ACTIVITIES

Cognitive:

List two things industry is doing to combat air pollution.

In-Class:

Outside or Community:

Affective:

Demonstrate an appreciation of the difficulty involved in solving the air pollution problem by citing costs, curtailment of productivity, possible employment drop and time for the correction of a given problem.

Weigh alternative methods of correcting a pollution problem, and the effect of each on the community.

Skills Used:

1. Human relations and cooperation
2. Problem solving
3. Journalism skills
4. Knowledge of pollution laws
5. Units of measurements and statistic skills.

A. Pollution Survey Assignment.
1. Divide class into small groups or pairs.
a. Have each group contact local industry for acceptance of visit. (Explain reason)
b. After acceptance, make sure that each group has a different industry.

A. Students will visit a local industry and conduct a survey to find out what (if anything) is being done to combat air pollution in their factory. They will then prepare a written summary of their visit.

2. Written survey:
 - a. Explain industry
 - b. Possible causes of pollution (by-products)
 - c. Methods of prevention by industry
 - d. Conclusions gained by visit
3. Panel of survey groups.
- a. Use one member of each survey group to form panel.
- b. Panel studies and collects surveys:
 1. List problems (different ones).
 2. Solutions being used
 3. Panel's solutions or conclusions
 4. Class drafts (majority opinion) own Pollution laws
 5. Compare with existing local and state pollution laws.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p><u>Publications:</u></p> <p>Books and Booklets - Bibliography of available materials, I-C-E.</p> <p><u>Audio-Visual:</u></p> <p>See sources of Environmental AV materials. I-C-E bibliography of available materials. Vertical file. Kit 24, Ecology in the '70s, Race for Death, I-C-E RMC</p> <p><u>Community:</u></p> <p>Local Chamber of Commerce. List of local pollution laws. List of state pollution controls. Local congressman: Interviewed or visit to class to explain own views on pollution controls.</p> <p>Division of Environment Protection (DNR)</p>	

Environmental:		Integrated with:	
CONCEPT NO. <u>6 - Resources</u>		SUBJECT <u>Social Studies</u>	
ORIENTATION <u>Population</u>		TOPIC/UNIT <u>Ancient History or Geography</u>	
BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive: Construct a large map of the world, showing locations of early civilization centers. List three similarities between early population centers and modern-day population centers.		In-Class: A. Class construct a large map of the world showing centers of early civilization. 1. Place map in center of bulletin board. B. Each student, after research, writes a story about a population center of early civilization, also making local comparisons. 1. Suggestions for reports: a. Food b. Clothing c. Shelter d. Safety e. Knowledge f. Ways of doing things 2. Place stories around map with a piece of colored yarn from population center to story. 3. These stories may be illustrated with free hand drawings painted or colored. a. Display near story.	
Affective: Accept the fact that there is an unequal distribution of natural resources which is responsible for wealth or lack of it in a given area.		Outside or Community: A. Library (I.M.C.) research on population distribution of early civilizations.	
Skills Used: 1. Research 2. Compilation of data 3. Writing			

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p><u>Publications:</u></p> <p><u>Exploring the Old World</u>, Follett, pp. 1-17 textbook.</p> <p><u>Atlas</u>, large wall maps, physical and political.</p> <p><u>Books:</u></p> <p><u>The Story of Long Ago</u>, Southworth.</p> <p><u>The Search for Early Man</u>, Horizon.</p> <p><u>Billions of Years of You</u>, Froman.</p> <p><u>The First Men in the World</u>, White.</p> <p><u>People - Places</u>, Mead.</p> <p><u>The Caves of the Great Hunters</u>, Baumann.</p> <p><u>Audio-Visual:</u></p> <p><u>Department of Natural Resources.</u></p> <p><u>Film:</u></p> <p><u>Yours Is the Land</u>, DNR</p> <p><u>Filmstrips:</u></p> <p><u>Saving the Soil</u>, FS - ST22; ICE RMC</p> <p><u>Kit 14, Game: The Ecological Crisis</u>, I-C-E RMC.</p> <p><u>Game: Man and His Environment</u>, ICE RMC, SG 4.</p> <p><u>The Planet Management Game</u>, SG7 I-C-E RMC.</p> <p><u>Community:</u></p>	

Environmental:

Integrated with:

CONCEPT NO. 6 - Resources

SUBJECT Social Studies

ORIENTATION Distribution of Natural Resources

TOPIC/UNIT Economic Geography

BEHAVIORAL OBJECTIVES

STUDENT-CENTERED LEARNING ACTIVITIES

Cognitive:

List four geographic regions and the primary natural resources found in each.

In-Class:

Outside or Community:

A. Discussion on what determines the type of industry and quality of life in various areas of the United States (Motivation).

B. Write letters to various State Departments to procure information and brochures on the kind of industry and natural resources found in each state.

C. Construct a bulletin board display from brochures and information received.

D. Set up guidelines or format for written reports. (English teacher could be called to assist).

E. Write reports (each student) showing how the displacement of natural resources affects the industry and quality of life comparing the information received from the various states.

Affective:

Investigate their region and determine or weigh the effect of natural resources on the quality of life within the region.

Skills Used:

1. Writing letters to gather information.
2. Making comparisons.
3. Preparing bulletin board displays.
4. Organizing.
5. Discussion

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p data-bbox="1430 277 1465 465"><u>Publications:</u></p> <p data-bbox="1333 155 1407 806">Bibliography of available materials Books and booklets, I-C-E.</p> <p data-bbox="901 277 936 496"><u>Audio—Visual:</u></p> <p data-bbox="769 155 883 769">Free maps, brochures, information from Chamber of Commerce of each state. A city map - Use to locate industrial, commercial, and residential centers within the city and/or county.</p> <p data-bbox="359 277 395 465"><u>Community:</u></p> <p data-bbox="204 155 313 643">English teacher for report guidelines. Mayor council member.</p>	

Environmental:		Integrated with:	
CONCEPT NO. <u>7 - Land Use</u>		SUBJECT <u>Social Studies</u>	
ORIENTATION <u>Population</u>		TOPIC/UNIT <u>Economic Geography</u>	
BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive: List four problems caused by increased population density. Evaluate two proposed methods to reduce the population density for the future giving reasons why you would support one or none of them.		In-Class: A. Construct a relief map labeling the stages of change that evolved due to population increase in the area shown. (local area) B. After studying this map, suggest possible alternate sites to present development and land use. C. Discuss why priorities should be placed on land use. D. A Land Ethic. Field Activity Guide; I-C-E - RMC.	Outside or Community: A. Visit a growing city such as Milwaukee, Madison, etc. and note the amount of land used by buildings and roadways in the "core" city and the surrounding area. B. Compare and contrast in writing or discussion, land use priorities of a larger metropolitan area with your own.
Affective: Investigate what determined land use in their community, and debate its effectiveness in promoting best land use.			
Skills Used: 1. Applying the principle - change. 2. Writing letters to receive information. 3. Drawing out necessary information for the construction of a map. 4. Constructing a "relief" floor map.			

SUGGESTED RESOURCES

Publications:

Archives of newspapers.
Bibliography of available materials -
Books and booklets, I-C-E

Audio-Visual:

Films:

#1581, Population Patterns in the U.S.
#6937, Population Problem: U.S.A.

Seeds of Change

Both obtained from:

Bureau of Audio-Visual Instruction

132 University Avenue

P. O. Box 2093

Madison, Wisconsin 53701

Game - Planet Management Game

557 I-C-E RMC

Kit 14, The Ecological Crisis,

I-C-E RMC

Community:

Chamber of Commerce

Libraries

Recorder of Deeds

State Historical Society

English teacher

Art teacher

Travel agencies - information,

posters, city maps

CONTINUED OR ADDED LEARNING ACTIVITIES

Environmental:

Integrated with:

CONCEPT NO. 7 - Land Use

SUBJECT Social Studies

ORIENTATION Land Use

TOPIC/UNIT Sociology

BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive: List five instances where the natural environment in an area was changed to satisfy man's desires or gains. Explain one reason why changes occurred for each of the instances listed above.	In-Class: A. All students are assigned to list and compile any case in which the natural environment has been altered by man for man's use. Examples: 1. Road and bridge construction. 2. Commercialism (tourism) 3. Economic gain (short term) 4. Transportation a. Railroads b. SST c. Combustion engine 5. Housing projects 6. Real estate profits 7. Civil corps of engineers a. Dams b. Hydro Elec. plants 8. Recreation areas a. Disneyland b. Parks and campgrounds d. KOA & other chains B. Each student will then list reasons man may have used to make these changes in our land. (man's values) (Continued)	Outside or Community: A. Discuss what changes have occurred in the community with people who have lived in the community for a relatively long period of time. B. Make a tour of the community in search of change.	
Affective: Desire to develop a promotion to establish a new value system regarding land use aimed at the average person in his community.			
Skills Used: 1. Recognizing the mistakes of the past. 2. Understanding & comparing accumulative data 3. Knowledge of values 4. Independent study & thought			

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SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p><u>Publications:</u></p> <p>Books:</p> <p><u>The World You Inherit</u>, John Navarra</p> <p><u>Our Polluted World</u>, John Perry</p> <p><u>This Crowded Planet</u>, Margaret Hyde</p> <p><u>Audio-Visual:</u></p> <p>Films:</p> <p><u>City Reborn</u>, color, 22 min., \$3.50, B&VI, Madison, Wisconsin</p> <p><u>Harmony</u>, I-C-E RMC</p> <p>Game:</p> <p><u>Man in His Environment</u>, Coca-Cola, 1970, also I-C-E RMC</p> <p>Kit:</p> <p><u>Conservation: A Picture Discussion Kit</u>, Kit 8; I-C-E RMC</p> <p><u>Environmental Quality Index</u>, Kit 9, I-C-E RMC</p> <p><u>Community:</u></p> <p><u>City Planner</u>.</p>	<p><u>CLASSROOM (Continued)</u></p> <p>C. Class discussion:</p> <ol style="list-style-type: none"> 1. Compile and compare lists of all students. 2. List of values by class which led to these changes in our environment. 3. Class development of new values. 4. Reasons why we need new values. 5. Summary. <p>D. Have local city planner make presentation on future land use or development in your area.</p> <p>E. <u>Land Use - A Simulation Game</u>; Field Activity Guide - I-C-E - RMC</p> <p>F. <u>Billboards and Signs</u>; Field Activity Guide - I-C-E - RMC (See attached activity.)</p>

Project I-C-E
Serving Schools in CESA's 3-8-9
1927 Main Street
Green Bay, Wisconsin 54301
Robert Warplinski

BILLBOARDS AND SIGNS

An Environmental Activity for Grades 5-12

Integration Potential

1. Social Studies
2. Mathematics
3. Art
4. Language Arts

Concepts Involved


1. Energy
3. Carrying Capacity
8. Values and Attitudes
9. Manage, Manipulate, Change
11. Individual Acts
12. Stewardship

Introduction

Advertising billboards, sales promotion, informational, and directional signs are a part of our everyday life. They vary only in number and intensity in different types of communities. There is a need and a purpose for signs and billboards ranging from providing necessary information to pure and simple economic exploitation. In the worst sense, they can create a monster called visual pollution that is both a real physical threat and an affront to our aesthetic senses. The issue then is to discriminate between what is necessary and desirable and what is unsightly and offensive in the number, kind, and type of signs and billboards. To accomplish this we need to focus and sharpen our senses of perception and visual discrimination. And finally, when necessary, we must be committed to some action in a rational way, at least to be able to offer some suggestions for improvement.

Billboards and Signs - Activity Worksheet
2 (Individuals or teams of 3-5)

1. Identify the area limits of survey -- draw a sketch of the streets, label them.

2. Take one, or several, pictures from a vantage point that best takes in the survey area: Locate your vantage point on sketch above by a .

3. Tally of commercial signs:

a) Identify type of business

b) Number of signs for each

Total Number _____

Total Number _____

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4. Tally of public control, direction, information signs

a) Identify kinds of signs

b) Number of each kind

Number of Kinds _____

Total Number _____

5. Count and describe any other signs or billboards in the area not included in Items 3 or 4:

a)

b)

c)

d)

e)

6. From the list of signs/billboards noted before

a) Select one most necessary and explain why:

b) Select one most unnecessary and explain why:

c) Select one most attractive and explain why:

d) Select one most unattractive and explain why:

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7. Select one commercial establishment, critique its use of signs and make suggestions for improvement.

8. Comment briefly on total perception, recommend any improvements you would make and tell why.

Resources: I-C-E RMC

115 DeSchool Primer: Your City Has Been Kidnapped
Jo

120 GEE, Our Man-Made Environment, Book 7
0

Film Noisy Landscape, 13 1/2 min., color
 (Donated by NEW Chapter, American Institute of Architects)

Environmental:

Integrated with:

CONCEPT NO. 7 - Land Use

SUBJECT Social Studies

ORIENTATION Water Resources & Population Growth

TOPIC/UNIT Economic Geography

BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive:	In-Class:	Outside or Community:	
State three reasons why world trade centers grew where they did.	A. Draw individual maps which represent Europe of 1400-1500. 1. Show important cities, seaports, trading centers. 2. Note location of same.	A. Request the Dept. of Natural Resources to supply information areas of Wisconsin & their locations.	
	B. Draw map of U. S. showing important cities, seaports, and trading centers. Note location. NOTE: Maps should prove importance of water to location of major cities.	B. Member of Regional Planning Commission to speak on effects of an adequate water supply.	
	C. Class Oriented Activity 1. Note connection between trade position & world importance of nation. 2. Prepare written reports discussing the location of trade centers and their effect on the environment. 3. Observe maps of the local area to note the importance of water to the location of cities.	C. Visit local sewage treatment plant & observe the effect it has on local waterway. D. Locate industries on local waterways.	
Affective:			
Defends the importance of water resources as a determinant of population growth.			
Skills Used:			
1. Map making			
2. Interdependence of man			
3. Effect thinking			
4. Reading map symbols			
5. Letter writing to gain information.			

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SUGGESTED RESOURCES

CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

World Atlas
 Books and booklets:
 Bibliography of Available
 Materials of Project I-C-E

Audio-Visual:Film:

#400 Boomsville, I-C-E RMC
 0607 Europe-Industrial Western
 (Factories, Mines & Waterways)
 BAVI, Madison, Wisconsin
 3730 Transportation: American
 Inland Waterways, BAVI

Filmstrip:

FS St1; Environmental Pollution: Our
 World in Crisis, I-C-E RMC

Film:

#320 The Stream, I-C-E RMC
 #280 The Gitts, I-C-E RMC
 Kit: #12 Water Pollution, ICE - RMC

Community:

Dept. of Natural Resources
 Local Planning Agency

Environmental:

CONCEPT NO. 7 - Land Use

Integrated with:

SUBJECT Social StudiesORIENTATION Urban Transition - Transportation SystemTOPIC/UNIT Sociology-Population Density

BEHAVIORAL OBJECTIVES	STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive:	In-Class:	Outside or Community:
<p>List three reasons why types of transportation systems have changed in his region over the last twenty years.</p> <p>Evaluate each of the changes in types of transportation systems as being good or harmful to the environment.</p>	<p>A. Set up situation by posing several problems or questions:</p> <ol style="list-style-type: none"> 1. Why is the area you live in or attend school in a population center and not a wilderness area? 2. How has the area changed in last 50 years? 3. What animals and birds are native to the area in question? How many have you seen? How many are now extinct? 4. Has character of town changed in past 50 years, i.e., industry, people, recreation? 5. The students may want to throw in several questions. <p>B. The above questions can be "answered" through a variety of approaches:</p> <ol style="list-style-type: none"> 1. Written reports of "then" & photographs of "now". 2. Interview golden-agers or possibly have them come in to classes. 3. Slide presentations plus audio using tape recorders. 4. Construct large pictures of extinct wildlife - use opaque projector if art ability is lacking. 	<p>A. Ask a real estate developer to discuss the areas he considers developing a housing project.</p> <p>B. Area retail store could supply someone with many years' experience to share these experiences with the class. His presentation should center on how his products have changed over the years.</p> <p>C. A representative from the city transportation department may be able to explain change goals for his department.</p>
<p>Affective:</p> <p>Attempt to explain the factors that affect changes in the use of land and the population density in their area.</p>		
<p>Skills Used:</p> <ol style="list-style-type: none"> 1. Interviewing 2. Comparing-contrasting 3. Organizing information 		

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p><u>Publications:</u></p> <p>Use of local library files Use newspaper files Publications showing wildlife - their habitat, etc. from: Dept. of Natural Resources Conservation Department Your assemblyman or senator - good source of materials.</p> <p><u>Audio-Visual:</u></p> <p>Movies - showing growth of industry related to area.</p> <p>A. Check local industry for materials & films.</p> <p>B. See sources of environmental materials - I-C-E Biblio.</p> <p><u>Community:</u></p> <p>Local farmer who has sold land for urban development. Real estate developer Member of the city road commission</p>	

Environmental:		Integrated with:	
CONCEPT NO.	8 - Values and Attitudes	SUBJECT	Social Studies
ORIENTATION	Regional Planning	TOPIC/UNIT	Economics
BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive:		In-Class:	Outside or Community:
Determine the cost and the process involved in an environmental change he things is necessary in his community.		<p>A. Have students do research on the costs of/or the money being spent on the areas of land, water, and air improvement. (local level)</p> <p>1. May build displays on how this is being done.</p> <p>a. Depending upon class size group work on the displays according to student's interest may be done.</p> <p>2. Information obtained may be presented to the class as a whole with oral presentations.</p>	<p>A. Students will go out into the local area to evaluate and estimate how much money it would cost for improvements in their areas. (Cost involved, resource people needed, political appropriation needs, new laws passed and how they need backing, scientific resources needed).</p> <p>1. Group evaluations of their area (listing of priorities of their area as needed in their local area, getting in resource people and displays of local problems).</p> <p>2. Group activity as a whole: Each group will present their case for their interest area. Present their priorities. Each group's priorities will be evaluated by the class. A list of class priorities will evolve.</p>
Affective:			
Demonstrate their awareness of the priority of changes needed to improve environmental problems by listing needs of their area in the order of importance.			
Skills Used:			
<ol style="list-style-type: none"> 1. Research 2. Organization of data 3. Presentation of material 4. Interviewing resource people 5. Making graphic displays 6. Collecting data 			

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p><u>Publications:</u></p> <p>Books:</p> <p>The Life of the Green Plant by Arthur Galston, Prentice-Hall</p> <p>Plant Life, Lorus Milne and Margery Milne, Prentice-Hall</p> <p>The Story of the Plant Kingdom by Merle Coulter and Howard Dittmer</p> <p>Conservation in America by Dorothy Hognner</p> <p>Soil: Use and Improvement by J. H. Stallings</p> <p>Man and the Good Earth by Anabel and Ellis Williams</p> <p><u>Audio-Visual:</u></p> <p>Films: BAVI</p> <p>#4546, Life in a Cubic Foot of Air, Coronet, 1953</p> <p>#3255 Life in the Grasslands, EBF, 1954</p> <p>#1723 Pond Life, EBF, 1950</p> <p>#2359 Vital Earth (This), EBF, 1947</p> <p>#2384 Water Supply, Academy, 1947</p> <p>#4816 Water for Farm & City, USDA, '59</p> <p>#5079 Conserving Our Soil Today, Coronet, 1960</p> <p>#2486 Work of the Atmosphere, EBF 1935</p> <p>Fit:</p> <p>The Land Use Game, ICE RMC</p> <p><u>Community:</u></p>	<p><u>PUBLICATIONS</u> (Continued)</p> <p>Books:</p> <p><u>Adaptation</u> by Bruce Wallace and Adrian Srie.</p> <p><u>Additional Interdisciplinary Areas:</u></p> <p><u>Science</u></p> <ol style="list-style-type: none"> 1. Water analysis activities (nutrients, pollutants, flow, temperature changes (causes and effects of), mapping of water sources, uses of the water supply and effects (organism life) 2. Land (soil classification, soil testing for acidity, soil plant life relation, land forms). 3. Air (testing air quality, air relationship with living organisms, causes of pollution). <p><u>Social Studies</u></p> <ol style="list-style-type: none"> 1. Study of local government-state federal. (structure-elected and appointed officials, authority, committees, how bills are written, how a law is passed). 2. Have students write a bill on an environmental problem arrived at from the list of priorities. 3. Role-playing concerning the passage of this bill. This would follow the procedure studied. <p><u>Math</u></p> <ol style="list-style-type: none"> 1. Study of: <ol style="list-style-type: none"> a. Costs involved in setting up of environmental programs b. Budgets of local, state, and federal government 2. Concepts: <ol style="list-style-type: none"> a. Ratios b. Fractions c. Decimals d. Multiplication, division, subtraction, and addition of the above.

Environmental:		Integrated with:	
CONCEPT NO. <u>8 - Values and Attitudes</u>		SUBJECT <u>Social Studies</u>	
ORIENTATION <u>Attitudes</u>		TOPIC/UNIT <u>Current Events</u>	
BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive: Explain that cultural, social, economic, and political factors affect a person's views of the environment using a specific occupational group as an example, in a panel discussion.		In-Class: A. Class will be divided into three groups for purpose of preparing a round-table discussion. The three groups will represent industry, farmers, and conservationists. (Note: select one person to be moderator). Subject of discussion could be: "Man's attitudes toward the environment." 1. Members of each group will select several members to represent their views on discussion group. 2. Entire group will be responsible for preparing their representatives for discussion by: a. Researching newspaper articles b. Pictures from magazines c. Interviews of local people associated with groups involved. d. Prepare charts-statistics e. Prepare bulletin board f. Dig out background info. from texts, etc. g. Write to various interest group information. B. Arrange to round-table discussion in class not heretofore involved - take vote at end to see which group presented best argument.	Outside or Community: A. Library (I.M.C.) research done by group members. B. Interviewing resource people associated with the various interest groups.
Affective: Accept the fact that different factors and ideas affect people's attitudes toward land use.			
Skills Used: 1. Interviewing skills 2. Public speaking 3. Information gathering 4. Organizing materials			

SUGGESTED RESOURCES**Publications:**

Newspapers and magazines
30 Basic Speech Experiences,
Clark Publishing Co.
Speaking by Doing, National
Textbook Co., Ill.

Audio—Visual:

See I-C-E Bibliography of
Available Materials

CONTINUED OR ADDED LEARNING ACTIVITIES**Community:**

Local resource people

Environmental:

Integrated with:

CONCEPT NO. 8 - Values and Attitudes

SUBJECT Social Studies

ORIENTATION Attitudes

TOPIC/UNIT Geography - Urban Growth

BEHAVIORAL OBJECTIVES

STUDENT-CENTERED LEARNING ACTIVITIES

Cognitive:

Define regional planning. List 3 reasons for the necessity of regional planning.

In-Class:

Outside or Community:

- | | |
|---|---|
| <p>A. Set up unit using fact: "Highways, cities, airports are taking over 1/2 million acres of farmland annually". Class discussion of problem - local level (city-school district).</p> <p>B. 1. List local places where such a situation exists
2. Are there possible alternate sites? Where?</p> <p>C. Set up student groups:
1. Write letters to surrounding states requesting appropriate information.
2. Construct a large chart, mural or picture graph presenting to class the situation in various states according to information gathered through letters.</p> <p>D. Construct graphs showing population trends & corresponding and use changes.</p> <p>E. Construct a mural depicting the last 100 years of an area, or a mural depicting conservation practices in their community. Display of old photos of area. These activities deal with local areas & issues - could branch out to include other areas of the United States.</p> <p>F.</p> | <p>A. Visit the local airport and observe and discuss benefits of air transportation. Also compare the benefits of air transportation with the environmental factors.</p> |
|---|---|

Affective:

Demonstrate an appreciation of conservation practices in his community by identifying such practices and stating they are good.

Skills Used:

1. Letter writing
2. Converting written information to chart, graph or mural form
3. Discussion

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p data-bbox="1487 270 1518 457"><u>Publications:</u></p> <p data-bbox="1310 185 1469 764">1970 Index - National Wildlife Federation I-C-E Bibliography of Available Materials</p> <p data-bbox="961 270 993 487"><u>Audio-Visual:</u></p> <p data-bbox="714 185 929 813">Man and His Environment Game, Coca-Cola Co., I-C-E RMC Kit 27 - <u>Changing Man's Values</u>, I-C-E RMC Kit 28 - <u>Saving What's Left</u>, I-C-E RMC</p> <p data-bbox="605 185 675 643">Film: #430; Urban Sprawl I-C-E - RMC</p> <p data-bbox="414 270 446 457"><u>Community:</u></p> <p data-bbox="294 185 400 701">Chamber of Commerce Highway Dept. representative Local airport</p>	

Environmental:		Integrated with:	
CONCEPT NO.	8 - Values and Attitudes	SUBJECT	Social Studies
ORIENTATION	Attitudes	TOPIC/UNIT	Comparative Economics
BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive: State two attitudes and values toward his environment. State two attitudes and values that are commonly held by a culture different from his own. Predict the resulting problems to be encountered if a person with values and attitudes common to one culture enters into another culture.		In-Class:	Outside or Community:
Affective: Students will be able to analyze and recognize the need for conservation practices. Accept attitudes and values commonly adhered to by other culture even though they are different from his own.		A. Using the text or outside resource material, determine the amount of goods and services the average individual in America uses in his lifetime.	A. A visit to local landfill site will graphically display that Americans discard more than many people of the world have.
		1. Contrast this with the basic needs of people of another culture.	B. Visit to local industry, preferably a "luxury" item.
		B. List things Americans consider essential to their standard of living.	C. Visit to local farm to investigate the methods used to conserve the soil.
		1. Compare these with another culture.	D. Invite a soil manager from local firm or state agency to tell class about soil conservation.
		C. Have individuals list the goods and services their families use in a given period of time.	E. Invite student from country with high population from local university to explain soil conservation in his country.
Skills Used: 1. Comparison/contrast 2. Soil conservation practices 3. Establishing standards of survival.			F. Invite exchange students in from other countries.
			G. Invite people in from another culture that live in the area.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p><u>Publications:</u></p> <p>National Geographic magazine <u>Farmer's Bulletins</u>, No. F2171, <u>"How To Control A Gully"</u>, 1961, Dept. of Agriculture <u>Agriculture Information Bulletin</u>, No. AIB95, "The Soil That Went to Town."</p> <p><u>Audio-Visual:</u></p> <p>BAVI, Madison, Wisconsin #4756 Land & People of India #2680 Land & People of Japan <u>End of the Trail</u>, Brown County Library <u>Story of the Plains Indians</u> Brown County Library Kits: Environment: Changing Man's Values, Kit 27, I-C-E RMC Saving What's Left, Kit 28, ICE-RMC</p> <p><u>Community:</u></p> <p>Soil Conservation Department Landfill site</p>	

Environmental:		Integrated with:											
CONCEPT NO. 8 - Values and Attitudes		SUBJECT Social Studies											
ORIENTATION Attitudes Toward Forest Resources		TOPIC/UNIT Geography - Conservation											
BEHAVIORAL OBJECTIVES	STUDENT-CENTERED LEARNING ACTIVITIES												
Cognitive: Demonstrate one of man's attitudes toward forest management and explain how it influences his environment.	<table border="1"> <thead> <tr> <th>In-Class:</th> <th>Outside or Community:</th> </tr> </thead> <tbody> <tr> <td>A. Introduce unit on trees with the following filmstrip, "Trees for 2001".</td> <td>A. Invite a forester to speak to class explaining about tree farming, value of a woodlot, also how trees prevent erosion.</td> </tr> <tr> <td>1. Class discuss trees and their value.</td> <td>B. Trip to tree farm.</td> </tr> <tr> <td>B. Discuss, after preparation, the following terms: Wind-break, shelter, deciduous, coniferous, and tree farming.</td> <td></td> </tr> <tr> <td>C. Each student will make a special study of one local tree and report to class. Points for study are: shape, height, leaves, maturity, bark, kind of soil, value of tree and its uses, draw and paint illustration of your trees.</td> <td></td> </tr> </tbody> </table>			In-Class:	Outside or Community:	A. Introduce unit on trees with the following filmstrip, "Trees for 2001".	A. Invite a forester to speak to class explaining about tree farming, value of a woodlot, also how trees prevent erosion.	1. Class discuss trees and their value.	B. Trip to tree farm.	B. Discuss, after preparation, the following terms: Wind-break, shelter, deciduous, coniferous, and tree farming.		C. Each student will make a special study of one local tree and report to class. Points for study are: shape, height, leaves, maturity, bark, kind of soil, value of tree and its uses, draw and paint illustration of your trees.	
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C. Each student will make a special study of one local tree and report to class. Points for study are: shape, height, leaves, maturity, bark, kind of soil, value of tree and its uses, draw and paint illustration of your trees.													
Affective: Appreciate the value of trees and the need for reforestation of denuded areas.													
Skills Used: 1. Select info about your tree 2. Take careful notes 3. Decide which details to include 4. Plan order in which you will present your information													

(continued)

SUGGESTED RESOURCES

Publications:

Books and Pamphlets:

Trees, Marlin Zim.
Forest Trees of Wisconsin
Trees of the Lake States
Trees and Game-Twin Crops
Protecting the Forests
Wisconsin Forests
Smokey Bear's Story

Audio-Visual:

Filmstrip:

FS ST23; Trees for 2001
I-C-E - RMC

CONTINUED OR ADDED LEARNING ACTIVITIES

SKILLS (Continued)

5. Plan an interesting introduction.
6. Plan a good concluding sentence or paragraph.
7. Proofread your report carefully.
8. Discussion.

Community:

Department of Natural Resources
 Ask a forester to speak to
 class on the subject of trees

Environmental:

Integrated with:

CONCEPT NO. 9 - Management

SUBJECT Social Studies

ORIENTATION Conservation

TOPIC/UNIT Geography

BEHAVIORAL OBJECTIVES

STUDENT-CENTERED LEARNING ACTIVITIES

Cognitive:

In-Class:

Outside or Community:

Draw and verbally explain a food pyramid of wildlife. List 5 laws that were enacted to prevent wildlife from becoming extinct.

- A. Introduce a wildlife unit with a movie that shows many animals. Suggestions for movie: Beaver Valley or Hunting Throughout the Year.
1. Talk about animals. Students may tell of their experiences pertaining to wild animals.

- A. Class should take a trip to a museum where there are good displays of mounted wildlife.
- B. Invite a resource person such as a game manager of Dept. of Natural Resources to talk to your class about the Balance of Nature.

Affective:

Defend the wildlife conservation regulations.

- B. Each student is required to report on one animal that he is interested in. Then do a large painted illustration, size 18 x 24 and display on bulletin board.
1. This may be done in coordination with an art and English teacher.

1. Discuss the conservation of wildlife, our hunting laws and their needs. Show movie, Protectors of the Outdoors, or Red 14. (Both movies are about wardens and their work).
2. Discuss the safety of firearms and show the movie, Shooting Safety. Ask a warden to talk to students explaining laws and rules of hunting. Students will learn them correctly and in turn may teach them to someone else.

Skills Used:

1. Reporting with an outline
- Name of animal
 - Characteristics
 - Habitat
 - Food
 - Conservation practice
 - Any experience with animals (continued)

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p><u>Publications:</u></p> <p>Library suggestions: <u>Mammals by Zim Hoffmeister</u> <u>Animal Camouflage</u> <u>Animal Sounds</u></p> <p><u>Audio-Visual:</u></p> <p>Bulletins: <u>Mammals of Wisconsin</u> <u>Animal Tracks</u> <u>Wildlife, People and the Land</u></p> <p>Films: (DNR) <u>Beaver Valley</u> <u>Hunting Throughout the Year</u> <u>Protectors of the Outdoors</u> <u>Red 14</u> <u>Shooting Safety</u> <u>Whitetails in Winter</u> <u>Nature's Half Acre, #210; ICE RMC</u></p> <p>Kits: <u>Ecology Kit 4 - I-C-E RMC (cont'd.)</u> <u>Community:</u></p> <p>Department of Natural Resources representative Game warden Wildlife manager</p>	<p><u>AUDIO-VISUAL (continued)</u></p> <p>Kits: Focus on America's Northeast, Kt 15; I-C-E RMC</p> <p><u>SKILLS (Continued)</u></p> <p>2. Poster activity</p> <ul style="list-style-type: none"> - Study pictures of animals that student is making a special study of - Practice drawing animal on large paper with a black crayon (can be newspaper) - When animal is satisfactory, cut out and transfer to poster paper - Draw in a fitting habitat; then paint - Allow students to help each other with constructive help

Environmental:		Integrated with:	
CONCEPT NO. 9 - Management		SUBJECT Social Studies	
ORIENTATION Land Use		TOPIC/UNIT Geography	
BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive: List five ways in which he uses forest products. Compare the use of forest products and metal or plastics from soil for a given product in terms of: a. Renewability b. Cost of resource c. Variety possible d. Other effects		In-Class: A. Forest resource management. (Group work). 1. Group A: develop historical concepts of forest production. 2. Group B: develop a list of items used in the classroom that come from timber products. 3. Group C: develop a presentation on the forest as a home for animals.	Outside or Community: A. If available, visit a local museum to view articles early woodsmen used. B. Visit a paper mill or other local industry to view present-day techniques in timber use and production. C. Take class trip to school forest, if possible.
Affective: Develop appreciation for forests and an awareness of his need for them by listing all items that he uses or comes in contact with in a day that are made from forest products. Attempt to identify characteristics of a forest managed with proper methods and those that are not managed properly.			
Skills Used: 1. Note taking 2. Organizing a presentation 3. Develop concepts of how trees are classified.			

SUGGESTED RESOURCES

Publications:

Various social studies books
 Geography book of the U.S.
 Encyclopedias
 Reference books

Audio-Visual:

Reference maps of physical
 features

Films, A-V materials

Free maps, posters of areas from
 travel agencies, airlines,
 gas stations, etc.

Film:

Harmony, #340; I-C-E - RMC

Game:

Man in His Environment, SG4; I-C-E RMC

See sources of A-V materials

in ICE Bibliography of avail. materials

(continued)

Community:

County forester

Have someone from the community
 involved in timber production
 talk to the class.

CONTINUED OR ADDED LEARNING ACTIVITIES

AUDIO-VISUAL (Continued)

Kits:

A Study of Urban and Rural Ecology, I-C-E RMC
 Environmental Studies, 64 Activity Cards, I-C-E RMC

Environmental:

Integrated with:

CONCEPT NO. 10 - Economic Planning

SUBJECT Social Studies

ORIENTATION Land Use

TOPIC/UNIT Geography or Current Events

BEHAVIORAL OBJECTIVES

STUDENT-CENTERED LEARNING ACTIVITIES

Cognitive:

Through a graphic presentation, demonstrate that man can change his environment with short-term economic gains that will produce long-term environmental losses.

In-Class:

Divide class into groups (approx. 4 to group).

Outside or Community:

A. Library (I.M.C.) research on specific subject area.
B. If possible, visit an area where short-term economic gains may result in long-term environmental loss.

Affective:

Promote that short-term gains are not always the most beneficial to man.

Dispute a statement -- that in which a non-environmental factor is given priority over an environmental factor.

Skills Used:

1. Speaking before group
2. Charting information
3. Designing of displays
4. Bulletin boards
5. Reading newspapers

1. Maps showing areas of country in question - perhaps a combination of maps showing growth of industry across the nation.
2. Chart or graph showing the number of people involved, money, etc.
3. Visual display (if possible) of products of industry, could include bulletin board of pictures.
4. Mount for display, newspaper or magazine articles dealing with industry & include commercials.

(Continued)

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p><u>Publications:</u></p> <p>Reference books dealing with industry under investigation Magazines, newspapers Publications dealing with our state's natural resources</p> <p><u>Audio—Visual:</u></p> <p>Video-tape of news, etc. These would have to be supplied by the teacher.</p> <p>Film: <u>Harmony</u>, #340; I-C-E - RMC</p> <p>Game: <u>Man in His Environment</u>, SG4; I-C-E - RMC</p> <p>Kit: <u>A Study of Rural and Urban Ecology</u>, KT 21; I-C-E - RMC</p> <p><u>Community:</u></p> <p>Industrial leaders, owners to visit class Visit local industries Chamber of Commerce Resource speakers</p>	<p><u>CLASSROOM</u> (Continued)</p> <p>B. (Second part of presentation would be "As result of) industry growth, have we lost anything?"</p> <ol style="list-style-type: none"> 1. Maps or charts showing decreased wildlife, natural resources, etc. 2. How does the use of product affect the environment? Example: cars - air pollution -- oil - pipe lines, well lines - ship wrecks -- housing - mud slides. 3. Mount news articles showing losses. 4. Possible 3D model of environmental change. Example - from forested area to cut over area, poorly designed housing development.

Environmental:

Integrated with:

CONCEPT NO. 10 - Economic Planning

SUBJECT Social Studies

ORIENTATION Land Abuse

TOPIC/UNIT Eurasian History, Geography, Current Events

BEHAVIORAL OBJECTIVES

STUDENT-CENTERED LEARNING ACTIVITIES

Cognitive:

Explain how improper care of forests causes increased erosion, disturbs balance of the existing ecosystem & leads to possible deprivation to future generations.

In-Class:

Evaluate a given procedure as to its value (effectiveness) in restoring the ecosystem to its state in 1900.

Outside or Community:

Affective:

Accepts the idea that land depleted of its life support base has an effect on the standard of living of future generations.

Skills Used:

1. Library skills.
2. Contrasting past & present.
3. Contrasting here & there.
4. Geographical location.
5. Observation.
6. Prediction.

A. In studying the countries of the Eastern Mediterranean, concentrate on the loss of the forest cover and soils of the region.

A. Students can investigate problems of cutting forests without providing for reforestation.

B. Show film or filmstrips on Middle East, showing present agricultural methods and problems.

B. Students can investigate the problem of grazing cattle on farm woodlots.

C. Discuss correlation between the damage to the land and the standard of living caused by unwise forest management in the Middle East and the problems America could face in the future.

C. Visit contrasting woodlots including the possibilities:

1. Grazed woodlot.
2. Protected woodlot.
3. Diameter limit or selective cut woodlot harvested by forest management plan approved by district forester.
4. Yuru the Guru Studies Ecology field activity guide, ICE RMC.

D. Students construct imaginary reports on life in the U.S. 200 years from now (given no outside source of resources from rest of world) that could result from failure to maintain our forest & soil resources.

D. Yuru the Guru Studies Ecology field activity guide, ICE RMC.

E. Show film explaining ways to protect a woodlot.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p><u>Publications:</u></p> <p>National Geographic articles on the countries of the Middle East (Balkans-Greece)</p> <p>USDA pamphlets on problem of grazing in the woodlot</p> <p>USFS & DNR publications on caring for woodlands</p> <p><u>Audio-Visual:</u></p> <p>Film:</p> <p><u>The Middle East</u>, BAVI, #3265</p> <p><u>Trees are a Crop</u>, B.VI, #2269</p> <p><u>Harmony</u>, #340, I-C-E - RMC</p> <p>Game:</p> <p><u>Man in His Environment</u>, SG4; ICE RMC</p> <p>Films:</p> <p><u>Junkdump</u>, #310; I-C-E - RMC</p> <p><u>Cry of the Marsh</u>, #390, I-C-E - RMC</p> <p><u>I-C-E Bibliography</u></p> <p><u>Community:</u></p> <p>DNR District Forester</p> <p>USFS District Ranger</p> <p>County Agriculture Extension Office</p> <p>Soil Conservation Service</p> <p>Local Woodland Owners</p> <p>Local sawmill operator</p>	

Environmental:		Integrated with:	
CONCEPT NO.	10 - Economic Planning	SUBJECT	Social Studies
ORIENTATION	Technology	TOPIC/UNIT	Economic Geography, Current Events
BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive: List four of man's technological short-term gains that have resulted in long-term environmental losses.	In-Class:		Outside or Community:
	A. Students bring magazines to class such as <u>Look</u> , <u>Fortune</u> , etc. and cut out pictures of man's technological shortcuts. B. Arrange pictures in a collage sequence and have students write a short caption for each picture indicating the effect such technological shortcuts have on the environment. C. Students will discuss how man's technology should consider environmental effect.		A. The student will take a trip through the community on a school bus and watch for areas where man has taken shortcuts in building projects, waste disposal, etc. B. The student will list these instances and report orally to the class the results. The student will also hypothesize the effect such short-term economic gains will have on environment.
Affective: Attempt to recommend how man should gear his technology, taking into consideration environmental losses which might evolve.			
Skills Used: 1. Observing 2. Listing 3. Reporting 4. Art work 5. Researching 6. Discussion			

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SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p><u>Publications:</u></p> <p><u>Man & the Biosphere</u>, Rand McNally Co.</p> <p><u>Air and Water Pollution</u>, Perma-bound Books</p> <p><u>God's Own Junkyard</u>, Holt, Rinehart and Winston, 1964</p> <p><u>Audio-Visual:</u></p> <p><u>Films:</u></p> <p><u>What Are We Doing To Our World</u>, BAVI</p> <p><u>Junkdump</u>, ICE FMC, Film #310</p> <p><u>Community:</u></p> <p>City engineer</p> <p>Industrial ecologist</p>	

Environmental:		Integrated with:	
CONCEPT NO. 10 - Economic Planning		SUBJECT Social Studies	
ORIENTATION Resource Usage		TOPIC/UNIT Economic Geography, Current Events	
BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive: List three ways harvesting forests can be both beneficial and harmful to man. Construct an appropriate management program for a given forest which includes: a. Planting b. Pruning c. Cutting		In-Class: A. View film <u>The Forest Produces</u> . B. Proceed with the suggested outside classroom activities. C. View film <u>Forest Conservation</u> . D. Discuss and emphasize the need for good forest management.	Outside or Community: A. Class will visit a sawmill and observe the process of trees to lumber, also the area where trees were cut down. B. Students may take pictures while visiting sawmill and forest area. C. Students will orally report on the loss of forest lands with the aid of pictures. D. Forester visiting class to explain misuse of trees and tree farming. E. Class may visit local paper mill. F. Class may visit a lumber yard.
Affective: Evaluate the environmental losses and make suggestions for reforestation.			
Skills Used: 1. Observing 2. Reporting			

SUGGESTED RESOURCES**CONTINUED OR ADDED LEARNING ACTIVITIES**Publications:

Trees and Forests, Stanley M. Jepsen
The Life of the Forest

Audio-Visual:Films:

The Forest Produces, BAVI
Forest Conservation, BAVI
Harmony, ICE RMC, Film #340

Community:

Dept. of Natural Resources
Forester

Environmental: CONCEPT NO. 11 - Individual Acts ORIENTATION Careers in Ecology		Integrated with: SUBJECT Social Studies TOPIC/UNIT Economics, Geography	
BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive:		In-Class:	Outside or Community:
Report on an occupation related to ecology stating the need for that occupation.		A. Brainstorm and make a list of the ecological occupations in and around the surrounding metropolitan area. B. Construct a "loose-leaf" book from the list of jobs and information gathered from interviews.	A. Have the students interview people in the community who have jobs that are directly or indirectly related to the environment. One question for the interview should be: How does your job benefit society and the environment in which we live? 1. Ask a real estate agent to report to the class on the selection and development of a sub-division.
Affective: Demonstrate an interest in a specific area of ecology. Promote the importance of the individual in solving the problems of ecology.		C. Construct a career bulletin board and display center. 1. Use information from any conceivable source. (colleges, newspapers, magazines, etc.) D. Debate the "pros" and "cons" of any two controversial careers. (Real estate broker vs. soil conservationist; manager of a paper making plant vs. forester.) 1. Following any debate, discuss how two interest groups with seemingly different ideas might work towards a common goal; environmental protection.	B. Have a game warden talk about fish and wildlife violations.
Skills Used: 1. Finding information in the library. 2. Reading for specific info. 3. Interviewing 4. Writing questions to use for interview.			

(Continued)

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p><u>Publications:</u></p> <p><u>Discussion and Debate, National Textbook Company</u> <u>Thirty Basic Speech Experiences, Clark Publishing</u> college bulletins, catalogs, etc.</p> <p><u>Audio-Visual:</u></p> <p>See sources of environmental AV materials. ICE RMC Bibliography</p> <p><u>Community:</u></p> <p>People in various occupations Library Real estate broker Subdivision English or speech teacher</p>	<p><u>SKILLS (Continued)</u></p> <ol style="list-style-type: none"> 5. Construction of "loose-leaf" book. 6. Constructing bulletin board and display center. 7. Debating

Environmental:		Integrated with:	
CONCEPT NO.	11 - Individual Acts	SUBJECT	Social Studies
ORIENTATION	Waste Disposal	TOPIC/UNIT	History - Middle Ages
BEHAVIORAL OBJECTIVES		STUDENT-CENTERED LEARNING ACTIVITIES	
Cognitive: Graphically illustrate how an individual act may be insignificant environmentally, but the same act duplicated many times will cause environmental alterations.		In-Class: A. Read about the sanitary disposal problems of towns in the Middle Ages. 1. Discuss the implications of disposing of wastes and garbage in the streets by individuals. 2. Write editorials to the <u>Middle Ages Gazette</u> decrying the dumping in the streets. B. View films and write critical summaries of each. C. Draw cartoons depicting garbage problems which would be applicable to both the Middle Ages and today. (Just change dress of character.)	Outside or Community: A. Guest speaker--art teacher speaking on effect of garbage on aesthetic values. B. Visit sanitary landfill and open dump. C. Visit sewage disposal facility.
Affective: Seek to gather any number of examples of what individuals are doing around the school that would destroy the environment if compounded and will suggest ways of making corrections.			
Skills Used: 1. Practice in use of reference texts. 2. Practice in use of <u>Reader's Guide to Periodic Literature</u> . 3. Development of political cartoons as a propaganda device.			

SUGGESTED RESOURCES

CONTINUED OR ADDED LEARNING ACTIVITIES

Publications:

New Dimensions of World History,
Frank Alwers, American Book
Company, 1969
A Primer on Waste Water Treatment,
Government Printing Office, 1969,
55¢

Audio—Visual:

Films:
Garbage, ICE RMC, Film #260
The Gifts, ICE RMC, Film #280
Junkdump, ICE RMC, Film #310
Kit:
America's Urban Crisis, ICE RMC,
KT 13

Community:

Sanitary landfill site
Open dump site
Sewage disposal plant
Art teacher

Environmental: CONCEPT NO. 12 - Stewardship ORIENTATION Water Resources		Integrated with: SUBJECT Social Studies TOPIC/UNIT Geography or Government	
BEHAVIORAL OBJECTIVES Cognitive: List three conservation practices needed for the correction of the damaged river system based on his observation of a local river area.		STUDENT-CENTERED LEARNING ACTIVITIES in-Class: A. Students will see movies: <u>River Valley and Rivers</u> that show graphic pictures of many geographic features associated with development of rivers and their utility to man. B. Class may discuss the following: 1. How did this river become polluted? 2. How did the misuse of the adjacent areas start erosion? 3. List four ways that these conditions can be corrected. 4. How did the misuse of the river and adjacent area do harm to other people in this area? C. Construct a mural depicting a river and its adjacent areas before the application of conservation practices and after. D. Brainstorming to formulate possible legislation for water resource protection.	
Affective: Formulate possible legislation to protect water resources and send it to appropriate lawmakers.		Outside or Community: A. Students may visit a local river area and note the harm done, also report on any other rivers they have seen.	
Skills Used: 1. Discussion. 2. Observation. 3. Sketching, color or paint. 4. Possible letter writing to Congressmen.			

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p><u>Publications:</u></p> <p><u>Water or Your Life</u>, Arthur H. Carhart</p> <p><u>Misc. Stream Improvement</u>, State Soil Conservation Committee, Madison, Wisconsin</p> <p><u>Audio-Visual:</u></p> <p><u>Films:</u></p> <p><u>River Valley</u>, BAVI</p> <p><u>Rivers</u>, BAVI</p> <p><u>Kit:</u></p> <p><u>Water Pollution</u>, ICE RMC, KT 12</p> <p><u>Community:</u></p> <p>Visit local river area</p>	

Environmental:

Integrated with:

CONCEPT NO. 12 - Stewardship

SUBJECT

Social Studies

ORIENTATION Environmental Law

TOPIC/UNIT

Sociology, Government

BEHAVIORAL OBJECTIVES

STUDENT-CENTERED LEARNING ACTIVITIES

Cognitive:

Develop a code of sportsman ethics which will be in harmony with the rights of both property and non-property owners.

In-Class:

Outside or Community:

Define stewardship accurately.

Affective:

Recommend that all Americans share in harmony with our environment.

Recommend that each person share the responsibility for the improvement of this environment.

Skills Used:

1. Knowledge of problems between landowners and non-landowners.
2. Ability to compromise on divergent land uses.
3. Ability to conduct investigative interviews without prejudice.

A. Scientific investigation:

1. List the rights of property owners.
2. List the rights of sportsmen and other non-property owners.
3. Weigh pros and cons of both sides of issue and each student should formulate codes of ethics which they believe both the landowner and non-landowners could use in harmony and share in our resources.

A. Investigate local laws on trespassing and local problems in this area that law enforcement officers contend with.

B. Investigate local problems of posting on lands.

1. Reasons (interviews with farmers).
2. Effects on sportsmen, etc.

C. Invite the county soil conservation officer for a discussion of his duties.

D. Invite the county health officer to explain the need for percolation tests.

E. Call upon local college ecosystems analyst to explain and/or support the idea of stewardship.

SUGGESTED RESOURCES	CONTINUED OR ADDED LEARNING ACTIVITIES
<p><u>Publications:</u></p> <p><u>Natural Partnerships, The Story of Symbiosis, Dorothy Shuttlesworth</u> <u>Sportsman's magazines & publications</u> <u>Environmental Protection Agency publications:</u> <u>Solid Waste</u> <u>Solid Waste-It Won't Go Away</u> <u>Solid Waste Disposal Act</u> <u>The Solid Waste Management Program 1-4</u> <u>A Critical Study of the Great Lakes and Who Owns the Water</u></p> <p><u>Audio-Visual:</u></p> <p><u>Films:</u> <u>Junkdum, ICE RMC, Film #310</u> <u>The Stream, ICE RMC, Film #320</u></p> <p><u>Community:</u></p> <p>Local farmers Local lakeshore property owners Local sportsmen Area game wardens Local law enforcement officers Dept. of Natural Resources</p>	